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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/730,143

12/09/2003

Kouta Fukui

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TAIYO CORPORATION

401 HOLLAND LANE

#407

ALEXANDRIA, VA 22314

EXAMINER

CHEA, THORL

ART UNIT

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1795

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/730,143 | Applicant(s) FUKUI, KOUTA | |
| | Examiner Thorl Chea | Art Unit 1795 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the communication on May 30, 2007; claims 1, 3-5, 8-10 are pending; and claims 2, 6-7 and 11-19 have been canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toya et al (US Patent No. 5,998,126), Uytterhoeven et al (US Patent No. 6,143,488), Toya et al (US Patent No. 5,656,419) et al, Suzuki et al (US Patent No. 4,211,839), EP 1096310 (EP'310), Matsumoto et al (US Patent No. 5,958,668), and Toya et al (US Patent No. 5,656,419).

Toya et al (US Patent No. 5,998,126) discloses a photothermographic material substantially as claimed. The photographic material contains a photosensitive silver halide material, a non-photosensitive silver salt of an organic silver salt, a reducing agent for the organic silver salt, binder, and wherein silver halide having grains size from 0.01 to 0.08 nm and silver halide including silver iodide and silver iodobromide grains having iodide content of 0.1 to 40 mole % in column 16, 50-64; the reducing agent including the bisphenols, antifoggant including halogen substituted organic compound, and the material absorb laser having wavelength of 300 nm to 700 nm. See column 34, claims 1-12; column 16, lines 50-64; column 32, lines 20-25; column 19, lines 34-39.

Uytterhoeven et al discloses the use of the silver halide wherein at least 80 mole % of photosensitive silver halide is silver iodide in combination with a diazine compound such as a phthalazine compound to provide a photothermographic material with post-processing light stability. See column 20, claim 1.

Matsumoto et al (US Patent No. 5,958,668) in column 18 discloses an additive for a photothermographic material including a bisphenol compound; a polyhalogenate compound having of formula within the scope of formula (H) of the claimed invention within an amount of 10 mole % to 40 mole % based on the organic silver salt, and silver halide including silver iodobromide and silver iodide. See column 18, line 30 wherein a bisphenol compound having formula within the scope of formula R-1 of the present claimed invention; the polyhalogenate compound in column 6, lines 25-50 and the amount thereof in abstract; and the silver iodobromide and silver iodide in column 17, line 38.

Toya et al (US Patent No. 5,656,419) discloses a polyhalogenate compound within the scope of formula (H) of the present claimed invention within an amount of 10^{-4} mol to 1 mol/mol of Ag. See column 2, line 5, and compound II and column 16, lines 54-60.

Suzuki et al (US Patent No. 4,211,839) in column 15, lines 35-68, discloses a bisphenol compound and in column 16, lines 1-68 disclose that suitable reducing agent are selected depending upon the kind of organic silver salt used. Acceptable reducing agent/organic silver salt can be easily determined by a simple test. For example, a sample reducing agent is mixed with a coating solution containing the organic silver salt, and the mixed coating solution coated on a support. The reducing agent may be use as combination of two or more thereof. The combined use of two or more poly-phenolic reducing agent having alkyl group at the two substitution

position adjacent to the hydroxyl-substituted position of the aromatic nucleus is effective for preventing discoloration upon exposure to light. EP'310 discloses the known bisphenol that a carbon bonding the benzene ring is secondary or tertiary or primary. See the bisphenol compound on pages 6-10 and the compound (I) on page 3.

The additives for the photothermographic material claimed in the present claimed invention such as bisphenol reducing agent taught in EP'310 and Suzuki et al; the silver iodide, silver iodobromide taught in Toya et al, Uytterhoeven et al and Matsumoto et al; and the polyhalogenate compound taught in Matsumoto et al and Toya et al within the amount claimed in the present claimed invention such as presented in the above paragraphs. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to form a photothermographic material using an known additives including the use one or more bisphenol compound known in the art such as taught in Suzuki et al and EP'310 in combination with silver iodide and the polyhalogenate compound taught in Toya et al, Uytterhoeven et al and Matsumoto et al with a reasonable expectation of achieving a photothermographic material which is effective for preventing discoloration upon exposure to light and having with long shelf life and high image density, and thereby provide a material as claimed.

Response to Arguments

4. Applicant's arguments filed on December 11, 2007 have been fully considered but they are not persuasive for the reason set forth above. The applicants rely on the Declaration under 37 CFR 1.132 on December 11, 2007 to obviate the prima facie case of obviousness rejection. It was argue that the submitted Declaration pursuant to 37 C.F.R. 1.132 shows unexpectedly

remarkable improvements in color tone of the silver image and unexpected improvements in photothermographic storability of the photothermographic materials of amended claim 1.

The argument is not persuasive. It cannot be determined the unexpected results from Table 1 of the Declaration.

The results are not commensurate with the scope of the claimed invention. See for instance the scope of the groups R^1 , $R^{1'}$, R^2 , $R^{2'}$, X^1 , $X^{1'}$ of formula R-1; R^{11} , $R^{11'}$, R^{12} , $R^{12'}$, X^{12} , $X^{12'}$ of the reducing agent R-2; and R^{21} , $R^{21'}$, R^{22} , $R^{22'}$, X^{21} , $X^{21'}$ of formula (R-3); the scope of the amount of formula (H) of 10^{-4} mole to 0.3 mole/a non-photosensitive organic silver salt and the scope of the amount of silver iodide content in the silver halide from 70 % to 100 % by mole. The applicants are referred to the scope of the compound 1-1, 1-9, 2-3 and 3-3 used in the Declaration in comparison with the scope of the reducing agents R-1, R-2 and R-3. The declaration shows the coating amount of organic polyhalogen compound in term of (mole/m²) while the scope of the claimed invention is related to the claiming of 10^{-4} mole to 0.3 mole/a non-photosensitive organic silver salt. Therefore, the criticality of the amount of polyhalogenate compound with respect to the amount of a non-photosensitive organic silver salt cannot be determined. It is improper to compare the results of the comparative samples such as samples 2-3 to samples 5-6 since the comparative samples contains different amount of polyhalogenate. The samples 2-4 contain 9.6×10^{-4} mole/m² while the samples 4-5 contains 4.8×10^{-4} mole/m². Therefore, the criticality of the combination of reducing agent cannot be determined. The inventive samples 1, 4, 7 are outside the scope of the claimed invention since the samples contains only a single reducing agent. It is improper to compare results shown in additional data 1 and the samples 2-3 since the samples 610 to 613 contains no reducing 3-3 or 3-1 of the

samples 2-3. Likewise, the results shown on page 6, Additional Data-2 contain different amount of polyhalogenate compound. Moreover, the Declaration appears to be silence with the use of phthalazine compound.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC
2008-03-03

/Thorl Chea/
Primary Examiner,
Art Unit 1795